

INTRODUCTION

Serves as an Agency specialist in epidemiology with area wide responsibility in the planning, development, and operation of the epidemiological delivery system, including animal health monitoring, disease surveillance, risk assessment, and response to emerging issues. Works closely with staff veterinarians, statisticians, and economists in the field application of epidemiological principles in the control and eradication of domestic and exotic diseases of livestock and/or poultry.

DUTIES

- Formulates long range plans with respect to the application of epidemiological methodology. Implements procedures consistent with the objectives of the Agency's epidemiological delivery system.
- Provides authoritative veterinary medical expertise on the uniform and accurate application of national standards for the monitoring, surveillance, detection, diagnosis, and disposition of disease problems of livestock and poultry.
- Develops and recommends area wide animal health monitoring, disease surveillance, risk assessment, and disease control and eradication policies among the various program activities in the area.
- Analyzes food animal health data and submits written reports on the epidemiological findings. Presents reports to State governments, livestock and poultry organizations, and other individuals and groups associated with the food animal industry.
- Provides expertise in forecasting anticipated occurrences and levels and location of diseases and provides assistance in the eradication of disease and improvement of health in food animals.
- Creates and/or maintains good working relationships with State officials, livestock and poultry industry officials, university faculty, and other public and private organizations for acceptance in meeting established program goals and results.
- Monitors, evaluates, and provides direction and guidance to laboratory support programs and personnel, as well as to field personnel.
- Participates in continuing education to keep abreast of progress in the field of epidemiology and disease research for the purpose of integrating these advances into VS program activities.

- Provides training to field personnel in basic and specialized applications of epidemiology in the detection, control, and eradication of diseases of livestock and poultry.
- Monitors the effectiveness of animal health information collection programs and disease control programs within the State.
- Designs and implements epidemiological assessments to improve understanding of animal health and disease.
- In the absence of the AVIC (supervisor), endorses health certificates and performs other administrative functions in the area as may be required.

B. FACTORS:

1. Knowledge Required by the Position

Mastery of epidemiology is required. Knowledge of related veterinary medical sciences such as animal health economics, immunology, serology, microbiology, pathology, parasitology, and toxicology is also required. Must have a comprehensive knowledge of a full range of infectious and noninfectious diseases and methods of measuring disease frequency, associations, and potential impact. Must be knowledgeable of methods of statistical inferences, epidemiological investigations, methods of sampling and estimation of sample sizes, population dynamics, biases, and designing survey and surveillance studies.

A full and detailed knowledge of the food animal industry and a clear understanding of the policies as they apply to the activities of Veterinary Services is required.

A working knowledge of computer technology and computer literacy is mandatory. This includes the ability to use statistical and epidemiological software packages provided by the Agency.

The incumbent must have the ability to communicate effectively in both oral and written presentations, which includes seminars and articles in industry and scientific journals.

2. Supervisory Controls

The employee and supervisor (Area Veterinarian in Charge) consult on major activities and priorities of immediate and long range epidemiological programs. The employee independently coordinates and conducts area-wide epidemiological studies, develops and recommends procedures for obtaining and analyzing factors causing the spread of diseases, provides expertise on epidemiological surveillance systems and recommends diagnostic procedures that will assist in disease control methods. The employee's work is reviewed in terms of the ability to alert and notify the supervisor and other officials of disease trends and potential risk associated problems, success of program objectives, and adherence to Agency regulations and directives. Accomplishments are reviewed in broad program terms on the basis of results in monitoring

animal health, disease surveillance, risk assessment, and reducing, controlling, or eradicating incidences of various persistent diseases from livestock and poultry.

3. Guidelines

The guidelines consist of domestic and world literature on epidemiology, Federal laws, regulations, and policies related to animal health activities. The employee is expected to be resourceful and innovative in establishing precedents or extending previous precedents in resolving difficult problems within legal restrictions. The employee may be required to exercise ingenuity and resourcefulness to make maximum utilization of the potential of automated systems in regard to data collection and reporting.

4. Complexity

The epidemiology officer plans, analyzes, reviews, and evaluates projects on surveillance and detection and special projects on animal health information and food safety. This responsibility entails assessment of the complex interrelationships of host, environment, and agent factors of multiple diseases and syndromes that may lead to new or different control and eradication requirements. The employee must deal with unique situations that are unprecedented and sensitive or controversial in nature. It also requires correlating plans and results with stake holders, including State and Federal animal health officials, educators, industry officials, and laboratory directors.

5. Scope and Effect

Chief purpose of the position is to provide program expertise in epidemiological surveillance systems and diagnostic abilities to locate and characterize the cause for persistent herd and flock diseases. The success of efforts in surveillance, detection, and animal health information based on the planning, evaluation, and recommendation of the epidemiology officer may have large scale impact on programs, industry, and public health. The need for an interdisciplinary approach to problem definition and resolution requires the skills of an epidemiology officer who will be able to coordinate such efforts with both intra-agency and interagency scope, as well as the respective animal industries and related organizations. Problems solved are extremely difficult in nature and the results carry a significant impact on program direction.

6. Personal Contacts

Personal contacts are with staff and subject matter officials in Federal or State governments, national organizations, educational institutions, and people from all phases of the food animal industries.

7. Purpose of Contacts

The purpose of the contacts is to clarify VS policies, initiate projects, evaluate results, and recommend program direction for future activities. Professional contacts should provide general and/or technical expert information that may influence compliance with existing APHIS policies and program initiatives.

8. Physical Demands

There may be prolonged standing, walking around on various kinds of farm surface conditions, and handling of restrained large and confused animals. The employee may also have to handle large heavy carcasses on rails to perform diagnostic tests or demonstrations, or to conduct gross, postmortem examinations. Extensive travel may be required and the operation of a motor vehicle is mandatory.

9. Work Environment

There is a high risk potential for exposure to unsafe working conditions and disease causing agents, some of which are highly contagious, infectious, and communicable to humans. Special safety control coordination and bio-security and bio-safety precautions must be exercised and followed at appropriate times.